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91377 (US). **IRANI, Cyrus** [US/US]; 1445 Via Coronel, Palos Verdes Estates, CA 90274 (US).

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(74) Agents: **DALEY-WATSON, Christopher, J. et al.**; Perkins Coie LLP, P.O. Box 1247, Seattle, WA 98111-1247 (US).

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(71) Applicant (for all designated States except US): **STRIX SYSTEMS, INC.** [US/US]; 26610 Agoura Road, Calabasas, CA 91302 (US).

(72) Inventors; and

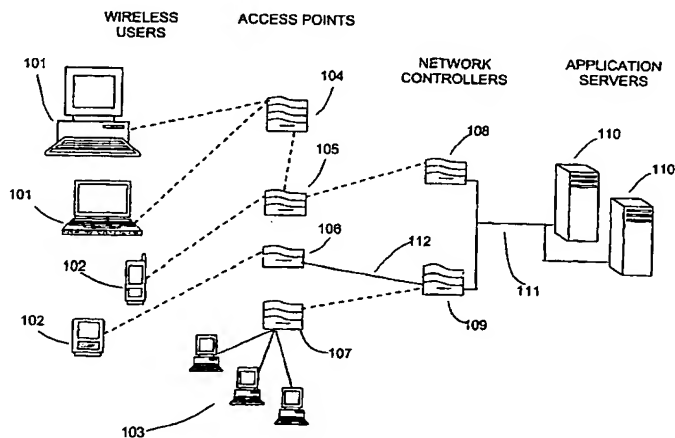
(75) Inventors/Applicants (for US only): **KALIKA, Leonid** [US/US]; 2118 Wilshire Boulevard #609, Santa Monica, CA 90403 (US). **BERG, Alexander** [US/US]; 19790 Greenbriar Drive, Tarzana, CA 91356 (US). **ABRAHAM, Gabi** [IL/US]; 5378 Sacramento Drive, Oak Park, CA

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[Continued on next page]

(54) Title: SELF-CONFIGURING, SELF-OPTIMIZING WIRELESS LOCAL AREA NETWORK SYSTEM



WIRELESS LOCAL AREA NETWORK SYSTEM

(57) Abstract: A system and associated method provides for a wireless local area network (WLAN) that permits mobile units to communicate with an external, wired network. Nodes in the WLAN include multiple components, such as a base module, antenna module, and one or more wireless modules. Indeed, this system can employ two or more wireless modules that employ different short-range wireless protocols, such as IEEE 802.11-type and Bluetooth protocols. The nodes may perform self-discovery to determine modules within the node and associated functionality, as well as identify neighboring nodes to thereby establish a mesh-type network. Nodes can be configured to provide connectivity to the wired network, while others (access points) communicate wirelessly with mobile devices. The nodes may then be interconnected wirelessly, or via wires.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H04Q 7/00

US CL : 370/338

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
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| Y | US 5,596,719 A (RAMAKRISHNAN et al) 21 January 1997 (21.01.1997), column 2, line 58 to column 3, line 39. | 13,14,15 |
| Y | US 5,812,531 A (CHEUNG et al) 22 September 1998 (22.09.1998), column 2, lines 21-32; column 7, lines 9-17 and lines 43-58; column 9, lines 30-52; column 11, line 65 to column 12, line 43. | 1,3-6,13,19,23-25 |
| Y | US 6,046,992 A (MEIER et al) 04 April 2000 (04.04.2000), column 1, lines 51-58; column 3, line 49 to column 4, line 18. | 13,14,15 |
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| Y | US 2002/0039353 A1 (BIENN et al) 04 April 2002 (04.04.2002), sections 0015-0016. | 1,6,19 |
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Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Authorized Officer

Nguyen Chau

Telephone No. (703)305-8395

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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
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| Y,P | US 2003/0202512 A1 (KENNEDY) 30 October 2003 (30.10.2003), sections 0024-0025 and sections 0031-0032. | 1,6,19 |